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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,309	06/05/2001	Erik Dahlman	040001-050	5727

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ERICSSON INC.
6300 LEGACY DRIVE
M/S EVR C11
PLANO, TX 75024

EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2684

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DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,309

Applicant(s)

DAHLMAN ET AL.

Examiner

Raymond S Dean

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 14, 16, and 18 - 20 is/are rejected.
- 7) ☒ Claim(s) 15 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because reference number 620 in Figure 5a states, "determine which user to use DPCH" but on page 14 lines 32 – 33 of the specification applicant states "In block 620 it is determined which user is to use the downlink shared channel (DSCH) within a certain interval". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 18 is objected to because of the following informalities: the word "system" should be removed from between "A" and "radio". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 13, 16, and 18 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baum et al. (US 6,385,462 B1) in view of Chuah et al. (US 6,693,952 B1).

Regarding Claim 1, Baum teaches a method of transmitting information in a radio communication system comprising at least one transmitter and at least one receiver (Figure 1, Column 3 lines 54 - 56), the method comprising the steps of: transmitting information in a channel from the at least one transmitter to the at least one receiver (Column 3 lines 34 – 56, Column 4 lines 22 – 25, the fact that there is a MCR means that information is being transmitted), using in the transmitting a modulation and/or coding scheme and adapting the modulation and/or coding scheme to give a secure communication of the information (Column 3 lines 34 – 49, Column 4 lines 22 – 25), and setting the power used for transmitting said information (Column 4 lines 19 – 21), wherein in the step of transmitting said information, the choice of the modulation and/or coding scheme is controlled by the level of the power at each instant set (Column 4 lines 22 – 25).

Baum does not specifically teach a first channel transmitting first information and a second channel transmitting second information.

Chuah teaches a first channel transmitting first information and a second channel transmitting second information (Column 2 lines 5 – 10).

Baum (Column 10 lines 22 – 27) and Chuah (Column 2 lines 59 – 61, UMTS uses WCDMA) both teach a wireless system that uses WCDMA thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use

the DSCH and DPCH taught in Chuah in the wireless system of Baum as these channels conform to the layering protocol used in WCDMA.

Regarding Claim 2, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Chuah further teaches a second channel that is transmitted from the same transmitter as the first channel (Column 2 lines 5 – 10, each user will receive these channels from the serving base station, which is the transmitter thus this is an inherent characteristic).

Regarding Claim 3, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Chuah further teaches a second channel that is transmitted from one of a plurality of transmitters, comprising the transmitter that transmits the first channel (Column 2 lines 5 – 10, Column 3 lines 9 – 10, this is a wireless system which means that there will be more than one base station and hence a plurality of transmitters that provide DSCHs and DPCHs).

Regarding Claim 4, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Baum further teaches wherein the modulation and coding scheme used is determined by the instantaneous transmitted power (Column 4 lines 22 – 25).

Baum does not specifically teach a first physical channel that is shared between several users with each user having a unique second channel and the user of the second channel being currently served by the first channel.

Chuah teaches teach a first physical channel that is shared between several users with each user having a unique second channel and the user of the second channel being currently served by the first channel (Column 2 lines 5 – 10).

Baum (Column 10 lines 22 – 27) and Chuah (Column 2 lines 59 – 61) both teach a wireless system that uses WCDMA thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the DSCH and DPCH taught in Chuah in the wireless system of Baum as these channels conform to the layering protocol used in WCDMA.

Regarding Claim 5, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Baum further teaches a transmitter that is a base station and a receiver that is a mobile station (Figure 1, Column 3 lines 54 – 56).

Regarding Claim 6, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Chuah further teaches wherein the first channel is a shared downlink channel and the second channel is a dedicated physical channel (Column 2 lines 5 – 10).

Regarding Claim 7, Chuah teaches all of the claimed limitations recited in Claim 6. Baum further teaches wherein the modulation and/or coding scheme used on the downlink when transmitting to a specific receiver is controlled by the power control commands transmitted by the receiver in the reverse link (Column 4 lines 7 – 25, the measured signal quality that is transmitted on the reverse link ultimately leads to change in the power thus there are inherent power control commands).

Regarding Claim 8, Baum teaches all of the claimed limitations recited in Claim 7. Baum further teaches wherein power control commands are transmitted in combination with other information (Column 4 lines 7 – 25, the mobile unit is operating

at a specific modulation and coding, which means that said unit is transmitting other information in addition to the power control commands).

Regarding Claim 9, Chuah teaches all of the claimed limitations recited in Claim 6. Baum further teaches the power is mapped into a suitable modulation and coding scheme (Column 4 lines 22 – 25).

Regarding Claim 10, Baum teaches all of the claimed limitations recited in Claim 9. Baum further teaches a varying modulation and coding scheme (Column 3 lines 34 – 45).

Regarding Claim 11, Baum teaches all of the claimed limitations recited in Claim 9. Chuah further teaches wherein the mapping is static (Column 3 lines 9 – 13, Column 3 lines 27 – 29, the code partitioning is the mapping).

Regarding Claim 12, Baum teaches all of the claimed limitations recited in Claim 9. Chuah further teaches wherein the mapping is dynamic (Column 3 lines 9 – 13, Column 3 lines 27 – 29, the code partitioning is the mapping).

Regarding Claim 13, Chuah teaches all of the claimed limitations recited in Claim 11. Chuah further teaches a predefined table (Column 3 lines 9 – 13, Column 3 lines 27 – 29, each of the codes are stored in memory thus there is an inherent table for the storage and partitioning of said codes).

Regarding Claim 16, Baum teaches a method of modifying the transmission parameters in a radio communication system comprising at least one transmitter, at least one receiver (Figure 1, Column 3 lines 54 - 56), a channel for transmitting information from the at least one transmitter to the at least one receiver (Column 3 lines

34 – 56, Column 4 lines 22 – 25, the fact that there is a MCR means that information is being transmitted), the method comprising the steps of setting the power used for transmitting said information (Column 4 lines 19 – 21); and adapting a modulation and/or coding scheme used in transmitting in the channel (Column 3 lines 34 – 49, Column 4 lines 22 – 25), wherein in the step of adapting, the choice of the modulation and/or coding scheme is controlled by the level of the power at each instant set (Column 4 lines 22 – 25).

Baum does not specifically teach a first channel transmitting first information and a second channel transmitting second information.

Chuah teaches a first channel transmitting first information and a second channel transmitting second information (Column 2 lines 5 – 10).

Baum (Column 10 lines 22 – 27) and Chuah (Column 2 lines 59 – 61, UMTS uses WCDMA) both teach a wireless system that uses WCDMA thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the DSCH and DPCH taught in Chuah in the wireless system of Baum as these channels conform to the layering protocol used in WCDMA.

Regarding Claim 18, Baum teaches a radio communication system comprising at least one transmitter, at least one receiver (Figure 1, Column 3 lines 54 - 56), a channel for transmitting information from at least one transmitter to the at least one receiver (Column 3 lines 34 – 56, Column 4 lines 22 – 25, the fact that there is a MCR means that information is being transmitted), the system comprising: means for setting the power used for transmitting said information (Column 4 lines 19 – 21), and means for

adapting a modulation and/or coding scheme used in transmitting in the channel (Column 3 lines 34 – 49, Column 4 lines 22 – 25) comprising means for controlling the choice of the modulation and/or coding scheme by means of the level of the power at each instant set (Column 4 lines 22 – 25).

Baum does not specifically teach a first channel transmitting first information and a second channel transmitting second information.

Chuah teaches a first channel transmitting first information and a second channel transmitting second information (Column 2 lines 5 – 10).

Baum (Column 10 lines 22 – 27) and Chuah (Column 2 lines 59 – 61, UMTS uses WCDMA) both teach a wireless system that uses WCDMA thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the DSCH and DPCH taught in Chuah in the wireless system of Baum as these channels conform to the layering protocol used in WCDMA.

Regarding Claim 19, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 1. Chuah further teaches a computer program product directly loadable into the internal memory of a digital computer comprising software portions when said product is run on a computer (Column 3 lines 23 – 27, the base station processor, which is the computer, is programmed with instructions or code, which is the computer program, said instructions are inherently stored in memory).

Regarding Claim 20, Baum in view of Chuah teaches all of the claimed limitations recited in Claim 16. Chuah further teaches a computer program product directly loadable into the internal memory of a digital computer comprising software portions

when said product is run on a computer (Column 3 lines 23 – 27, the base station processor, which is the computer, is programmed with instructions or code, which is the computer program, said instructions are inherently stored in memory).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baum et al. (US 6,385,462 B1) in view of Chuah et al. (US 6,693,952 B1) and in further view of Balachandran et al. (US 6,567,375 B2).

Regarding Claim 14, Chuah teaches all of the claimed limitations recited in Claim 12. Baum in view of Chuah does not specifically teach wherein the mapping is changed as a function of some retransmission requests for data blocks being retransmitted over the shared channel.

Balachandran teaches wherein the mapping is changed as a function of some retransmission requests for data blocks being retransmitted over the shared channel (Column 3 lines 48 – 67, Column 6 lines 1 – 13, the MCS changes to compensate for the delay caused by the ARQs).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ARQ-MCS method taught above in Balachandran in the wireless system of Baum in view of Chuah for the purpose of creating a dynamic wireless system that adapts it's communication links to compensate for lost or corrupted data packets.

Allowable Subject Matter

6. Claim 15 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding Claims 15 and 17, It is well known in the art that when a mobile unit is going through the handoff process that there will be a period when said mobile unit will receive transmissions from both the current serving base station and the new serving base station. Baum in view of Chuah also teaches both the DPCH and DSCH being transmitted from the same base station. The prior art of record, however, fails to specifically teach the power of said DPCH being multiplied with a constant k , where k is greater than or equal to one, where k is also used for determining the MCS of the DSCH.

Conclusion

7. Any inquiry concerning this communication should be directed to Raymond S. Dean at telephone number (703) 305-8998.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Application/Control Number: 09/873,309
Art Unit: 2684

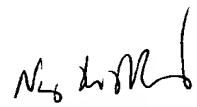
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Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand – delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377

A large, stylized handwritten signature in black ink, appearing to read "Raymond Lee".A smaller handwritten signature in black ink, appearing to read "Nay Maung".

NAY MAUNG
SUPERVISORY PATENT EXAMINER